

What is claimed is:

1. A method of qualifying prostate cancer status in a subject comprising:
 - (a) measuring at least one biomarker in a sample from the subject, wherein the biomarker is selected from the group consisting of
 - Marker I: having a molecular weight of about 7.808 kD
 - Marker II: having a molecular weight of about 14.576 kD
 - Marker III: having a molecular weight of about 2.062 kD
 - Marker IV: having a molecular weight of about 7.974 kD
 - Marker V: having a molecular weight of about 6.677 kD
 - Marker VI: having a molecular weight of about 3.936 kD
 - Marker VII: having a molecular weight of about 60.958 kD
 - Marker VIII: having a molecular weight of about 5.149 kD
 - Marker IX: having a molecular weight of about 5.861 kD
 - Marker X: having a molecular weight of about 28.098 kD
 - Marker XI: having a molecular weight of about 2.996 kD
 - Marker XII: having a molecular weight of about 24.346 kD
 - Marker XIII: having a molecular weight of about 6.722 kD
 - Marker XIV: having a molecular weight of about 5.999 kD
 - Marker XV: having a molecular weight of about 6.158 kD
 - Marker XVI: having a molecular weight of about 55.785 kD
 - Marker XVII: having a molecular weight of about 2.540 kD
 - Marker XVIII: having a molecular weight of about 8.019 kD
 - Marker XIX: having a molecular weight of about 4.658 kD
 - Marker XX: having a molecular weight of about 14.703 kD
 - Marker XXI: having a molecular weight of about 2.68 kD
 - Marker XXII: having a molecular weight of about 3.16 kD
 - Marker XXIII: having a molecular weight of about 10.3 kD
 - Marker XXIV: having a molecular weight of about 10.8 kD
 - Marker XXV: having a molecular weight of about 12.7 kD
 - Marker XXVI: having a molecular weight of about 17.9 kD
 - Marker XXVII: having a molecular weight of about 2.79 kD
 - Marker XXVIII: having a molecular weight of about 3.32 kD
 - Marker XXIX: having a molecular weight of about 4.29 kD

Marker XXX: having a molecular weight of about 15.9 kD

Marker XXXI: having a molecular weight of about 16.1 kD

Marker XXXII: having a molecular weight of about 16.3 kD, and combinations thereof, and

(b) correlating the measurement with prostate cancer status.

2. The method of claim 1 further comprising:

(c) managing subject treatment based on the status.

3. The method of claim 2, wherein managing subject treatment is selected from ordering more tests, performing surgery, and taking no further action.

4. The method of claim 2 further comprising:

(d) measuring the at least one biomarker after subject management.

5. The method of claim 1 wherein the prostate cancer status is selected from the group consisting of the subject's risk of cancer, the presence or absence of disease, the type of disease, the stage of disease and the effectiveness of treatment of disease.

6. A method for differentiating between a diagnosis of prostate cancer and non-prostate cancer comprising:

(a) detecting in a subject sample an amount of at least one biomarker selected from the group consisting of:

Marker I: having a molecular weight of about 7.808 kD

Marker II: having a molecular weight of about 14.576 kD

Marker III: having a molecular weight of about 2.061 kD

Marker IV: having a molecular weight of about 7.973 kD

Marker V: having a molecular weight of about 6.677 kD

and

Marker VI: having a molecular weight of about 3.935 kD;

and

(b) correlating the amount with a diagnosis of prostate cancer or non-prostate cancer.

7. A method for differentiating between a diagnosis of prostate cancer and benign prostate hyperplasia comprising:

(a) detecting in a subject sample an amount of at least one biomarker selected from the group consisting of:

Marker VII: having a molecular weight of about 60.958 kD

Marker VIII: having a molecular weight of about 5.148 kD

Marker IX: having a molecular weight of about 5.860 kD

Marker X: having a molecular weight of about 28.097 kD

Marker XI: having a molecular weight of about 2.996 kD

Marker XII: having a molecular weight of about 24.346 kD

Marker XIII: having a molecular weight of about 6.722 kD

Marker XIV: having a molecular weight of about 5.999 kD

Marker XV: having a molecular weight of about 6.159 kD

Marker XVI: having a molecular weight of about 55.785 kD

(b) correlating the amount with a diagnosis of prostate cancer or benign prostate hyperplasia.

8. A method for differentiating between a diagnosis of prostate cancer and benign prostate hyperplasia comprising:

(a) detecting in a subject sample an amount of at least one biomarker selected from the group consisting of:

Marker XXI: having a molecular weight of about 2.68 kD

Marker XXII: having a molecular weight of about 3.16 kD

Marker XXIII: having a molecular weight of about 10.3 kD

Marker XXIV: having a molecular weight of about 10.8 kD

Marker XXV: having a molecular weight of about 12.7 kD, and

Marker XXVI: having a molecular weight of about 17.9 kD.

(b) correlating the amount with a diagnosis of prostate cancer or benign prostate hyperplasia.

9. A method for differentiating between a diagnosis of organ defined prostate cancer and non-organ-defined prostate cancer comprising:

(a) detecting in a subject sample an amount of at least one biomarker selected from the group consisting of:

Marker XVII: having a molecular weight of about 2.540 kD

Marker XVIII: having a molecular weight of about 8.018 kD

Marker XIX : having a molecular weight of about 4.658kD,

and

Marker XX : having a molecular weight of about 14.703 kD;

and

(b) correlating the amount with a diagnosis of organ-defined prostate cancer or non-organ-defined prostate cancer.

10. A method for differentiating between a diagnosis of organ defined prostate cancer and non-organ-defined prostate cancer comprising:

(a) detecting in a subject sample an amount of at least one biomarker selected from the group consisting of:

Marker XXVII: having a molecular weight of about 2.79 kD

Marker XXVIII: having a molecular weight of about 3.32 kD

Marker XXIX: having a molecular weight of about 4.29 kD

Marker XXX: having a molecular weight of about 15.9 kD

Marker XXXI: having a molecular weight of about 16.1 kD, and

Marker XXXII: having a molecular weight of about 16.3 kD.

(b) correlating the amount with a diagnosis of organ-defined prostate cancer or non-organ-defined prostate cancer.

11. The method of any of claims 1-10 wherein the marker is detected by mass spectrometry.

12. The method of any of claims 1-10 wherein the marker is detected by capturing the marker on a biochip having an affinity surface and detecting the captured marker by SELDI.

13. The method of claim 11 wherein the affinity surface comprises immobilized metal chelate of nickel.

14. The method of claim 13 wherein the biochip is IMAC3 ProteinChip® Array.

15. The method of any of claims 1-10 wherein at least one biomarker is used in combination with prostate specific antigen (PSA).
16. The method of claim 15, wherein PSA is detected at about 3 ng/ml in a sample of a patient.
17. The method of claim 15, wherein PSA is not detectable in a sample of a patient.
18. The method of any one of claims 1-10 wherein the patient sample is selected from the group consisting of blood, blood plasma, serum, urine, tissue, cells, organs and seminal fluids.
19. The method of any one of claims 1-10 wherein the patient sample is serum.
20. The method of any one of claims 1-10 comprising:
generating data on immobilized subject samples on a biochip, by subjecting said biochip to laser ionization and detecting intensity of signal for mass/charge ratio;
and,
transforming the data into computer readable form;
executing an algorithm that classifies the data according to user input parameters, for detecting signals that represent biomarkers present in prostate cancer patients and are lacking in non-cancer subject controls.
21. The method of any one of claims 1-10 wherein one or more of the biomarkers are detected using laser desorption/ionization mass spectrometry, comprising:
providing a probe adapted for use with a mass spectrometer comprising an adsorbent attached thereto;
contacting the subject sample with the adsorbent;
desorbing and ionizing the biomarker or biomarkers from the probe; and,
detecting the deionized/ionized markers with the mass spectrometer.
22. The method of claim 21, wherein the adsorbent is hydrophobic, hydrophilic, ionic or metal chelate adsorbent.

23. The method of claim 22, wherein the adsorbent is comprised of nickel.
24. The method of claim 21, wherein the adsorbent is an antibody, single- or double stranded oligonucleotide, amino acid, protein, peptide or fragments thereof.
25. The method of any one of claims 1-10, wherein at least one or more protein biomarkers are detected using immunoassays.
26. A process for purification of a biomarker, comprising fractionating a sample comprising one or more protein biomarkers by size-exclusion chromatography and collecting a fraction that includes the one or more biomarker; and/or fractionating a sample comprising the one or more biomarkers by anion exchange chromatography and collecting a fraction that includes the one or more biomarkers, wherein the biomarker is selected from:
- Marker I: having a molecular weight of about 7.808 kD
 - Marker II: having a molecular weight of about 14.576 kD
 - Marker III: having a molecular weight of about 2.062 kD
 - Marker IV: having a molecular weight of about 7.974 kD
 - Marker V: having a molecular weight of about 6.677 kD
 - Marker VI: having a molecular weight of about 3.936 kD
 - Marker VII: having a molecular weight of about 60.958 kD
 - Marker VIII: having a molecular weight of about 5.149 kD
 - Marker IX: having a molecular weight of about 5.861 kD
 - Marker X: having a molecular weight of about 28.098 kD
 - Marker XI: having a molecular weight of about 2.996 kD
 - Marker XII: having a molecular weight of about 24.346 kD
 - Marker XIII: having a molecular weight of about 6.722 kD
 - Marker XIV: having a molecular weight of about 5.999 kD
 - Marker XV: having a molecular weight of about 6.158 kD
 - Marker XVI: having a molecular weight of about 55.785 kD
 - Marker XVII: having a molecular weight of about 2.540 kD
 - Marker XVIII: having a molecular weight of about 8.019 kD
 - Marker XIX : having a molecular weight of about 4.658 kD
 - Marker XX: having a molecular weight of about 14.703 kD
 - Marker XXI: having a molecular weight of about 2.68 kD

Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD
Marker XXVII: having a molecular weight of about 2.79 kD
Marker XXVIII: having a molecular weight of about 3.32 kD
Marker XXIX: having a molecular weight of about 4.29 kD
Marker XXX: having a molecular weight of about 15.9 kD
Marker XXXI: having a molecular weight of about 16.1 kD, and
Marker XXXII: having a molecular weight of about 16.3 kD.

27. The process of claim 26, wherein fractionation is monitored for purity on normal phase and immobilized nickel arrays.

28. The process of claim 26, for generating data on immobilized marker fractions on an array, comprising:

subjecting said array to laser ionization and detecting intensity of signal for mass/charge ratio;

transforming the data into computer readable form; and

executing an algorithm that classifies the data according to user input parameters, for detecting signals that represent markers present in cancer patients and are lacking in non-cancer subject controls.

29. The process of claim 26, wherein fractions are subjected to gel electrophoresis and correlated with data generated by mass spectrometry.

30. A kit for aiding the diagnosis of cancer, comprising:

an adsorbent attached to a substrate, wherein the adsorbent retains one or more biomarkers selected from:

Marker I: having a molecular weight of about 7.808 kD

Marker II: having a molecular weight of about 14.576 kD

Marker III: having a molecular weight of about 2.062 kD

Marker IV: having a molecular weight of about 7.974 kD

Marker V: having a molecular weight of about 6.677 kD
Marker VI: having a molecular weight of about 3.936 kD
Marker VII: having a molecular weight of about 60.958 kD
Marker VIII: having a molecular weight of about 5.149 kD
Marker IX: having a molecular weight of about 5.861 kD
Marker X: having a molecular weight of about 28.098 kD
Marker XI: having a molecular weight of about 2.996 kD
Marker XII: having a molecular weight of about 24.346 kD
Marker XIII: having a molecular weight of about 6.722 kD
Marker XIV: having a molecular weight of about 5.999 kD
Marker XV: having a molecular weight of about 6.159 kD
Marker XVI: having a molecular weight of about 55.784 kD
Marker XVII: having a molecular weight of about 2.540 kD
Marker XVIII: having a molecular weight of about 8.019 kD
Marker XIX: having a molecular weight of about 4.658 kD
Marker XX: having a molecular weight of about 14.703 kD
Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD
Marker XXVII: having a molecular weight of about 2.79 kD
Marker XXVIII: having a molecular weight of about 3.32 kD
Marker XXIX: having a molecular weight of about 4.29 kD
Marker XXX: having a molecular weight of about 15.9 kD
Marker XXXI: having a molecular weight of about 16.1 kD, and
Marker XXXII: having a molecular weight of about 16.3 kD.

31. The kit of claim 30, further comprising written instructions for use of the kit for detection of cancer.

32. The kit of claim 30, wherein the instruction provide for contacting a test sample with the absorbent and detecting one or more biomarkers retained by the absorbent.

33. The kit of claim 30, wherein the substrate allows for adsorption of said adsorbent.

34. The kit of claim 30, wherein the substrate can be hydrophobic, hydrophilic, charged, polar, metal ions.

35. The kit of claim 30, wherein the adsorbent is an antibody, single or double stranded oligonucleotide, amino acid, protein, peptide or fragments thereof.

36. The kit of claim 30, wherein one or more protein biomarkers is detected using mass spectrometry.

37. The kit of claim 30, wherein one or more protein biomarkers is detected using immunoassays.

38. The kit of claim 37, wherein the immunoassay is an ELISA.

39. The method of claim any one of claims 1 through 10, further comprising measuring the amount of each biomarker in the subject sample and determining the ratio of the amounts between the markers.

40. The method of any one of claims 1-10, further comprising measuring the amount of each biomarker in the subject sample and determining the ratio of the amounts between the biomarkers and known prostate cancer markers.

41. The method of any one of claims 1-10, wherein the stage of prostate cancer is assessed.

42. A protein purified on a biochip selected from:

Marker I: having a molecular weight of about 7.808 kD
Marker II: having a molecular weight of about 14.576 kD
Marker III: having a molecular weight of about 2.062 kD
Marker IV: having a molecular weight of about 7.974 kD
Marker V: having a molecular weight of about 6.667 kD
Marker VI: having a molecular weight of about 3.936 kD
Marker VII: having a molecular weight of about 60.958 kD
Marker VIII: having a molecular weight of about 5.149 kD
Marker IX: having a molecular weight of about 5.861 kD
Marker X: having a molecular weight of about 28.098 kD
Marker XI: having a molecular weight of about 2.996 kD
Marker XII: having a molecular weight of about 24.346 kD
Marker XIII: having a molecular weight of about 6.722 kD
Marker XIV: having a molecular weight of about 5.999 kD
Marker XV: having a molecular weight of about 6.159 kD
Marker XVI: having a molecular weight of about 55.784 kD
Marker XVII: having a molecular weight of about 2.540 kD
Marker XVIII: having a molecular weight of about 8.019 kD
Marker XIX: having a molecular weight of about 4.658 kD
Marker XX: having a molecular weight of about 14.703 kD
Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD
Marker XXVII: having a molecular weight of about 2.79 kD
Marker XXVIII: having a molecular weight of about 3.32 kD
Marker XXIX: having a molecular weight of about 4.29 kD
Marker XXX: having a molecular weight of about 15.9 kD
Marker XXXI: having a molecular weight of about 16.1 kD, and
Marker XXXII: having a molecular weight of about 16.3 Kd.

43. The purified proteins of claim 42, comprising a composition of a combination of at least two proteins.

44. The method of claim 1 wherein measuring comprises:

- (a) providing a subject sample of blood or a blood derivative;
- (b) fractionating proteins in the sample on an anion exchange resin and collecting fractions that contain at least one marker selected from the group consisting of Marker I through XXXII; and
- (c) capturing at least one marker selected from the group consisting of Marker I through XXXII from the fractions on a surface of a substrate comprising capture reagents that bind the protein biomarkers.

45. The method of claim 44 wherein the substrate is a SELDI probe comprising an IMAC3 nickel surface and wherein the protein biomarkers are detected by SELDI.

46. The method of claim 44 wherein the substrate is a SELDI probe comprising biospecific affinity reagents that bind at least one marker selected from the group consisting of Marker I through XXXII and wherein the protein biomarkers are detected by SELDI.

47. The method of claim 44 wherein the substrate is a microtiter plate comprising biospecific affinity reagents that bind at least one marker selected from the group consisting of Marker I through XXXII and the protein biomarkers are detected by immunoassay.

48. The method of claim 1, wherein measuring is selected from detecting the presence or absence of the biomarkers(s), quantifying the amount of marker(s), and qualifying the type of biomarker.

49. The method of claim 1 wherein at least one biomarker is measured using a biochip array.

50. The method of claim 49 wherein the biochip array is a protein chip array.

51. The method of claim 49 wherein the biochip array is a nucleic acid array.
52. The method of claim 49 wherein at least one biomarker is immobilized on the biochip array.
53. The method of claim 1 wherein the protein biomarkers are measured by SELDI.
54. The method of claim 1 wherein the protein biomarkers are measured by immunoassay.
55. The method of claim 1 wherein the correlating is performed by a software classification algorithm.
56. The method of claim 1 wherein the sample is selected from blood, serum and plasma.
57. A method comprising:
- (a) measuring a plurality of biomarkers in a sample from the subject, wherein the biomarkers are selected from the group consisting of:
- | | |
|--------------|--|
| Marker I: | having a molecular weight of about 7.808 kD |
| Marker II: | having a molecular weight of about 14.576 kD |
| Marker III: | having a molecular weight of about 2.062 kD |
| Marker IV: | having a molecular weight of about 7.974 kD |
| Marker V: | having a molecular weight of about 6.677 kD |
| Marker VI: | having a molecular weight of about 3.936 kD |
| Marker VII: | having a molecular weight of about 60.958 kD |
| Marker VIII: | having a molecular weight of about 5.149 kD |
| Marker IX: | having a molecular weight of about 5.861 kD |
| Marker X: | having a molecular weight of about 28.098 kD |
| Marker XI: | having a molecular weight of about 2.996 kD |
| Marker XII: | having a molecular weight of about 24.346 kD |
| Marker XIII: | having a molecular weight of about 6.722 kD |
| Marker XIV: | having a molecular weight of about 5.999 kD |
| Marker XV: | having a molecular weight of about 6.158 kD |

Marker XVI: having a molecular weight of about 55.785 kD
Marker XVII: having a molecular weight of about 2.540 kD
Marker XVIII: having a molecular weight of about 8.019 kD
Marker XIX : having a molecular weight of about 4.658 kD
Marker XX: having a molecular weight of about 14.703 kD
Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD
Marker XXVII: having a molecular weight of about 2.79 kD
Marker XXVIII: having a molecular weight of about 3.32 kD
Marker XXIX: having a molecular weight of about 4.29 kD
Marker XXX: having a molecular weight of about 15.9 kD
Marker XXXI: having a molecular weight of about 16.1 kD, and
Marker XXXII: having a molecular weight of about 16.3 kD.

58. The method of claim 57 wherein the plurality are selected from the group consisting of:

Marker I: having a molecular weight of about 7.808 kD
Marker II: having a molecular weight of about 14.576 kD
Marker III: having a molecular weight of about 2.061 kD
Marker IV: having a molecular weight of about 7.973 kD
Marker V: having a molecular weight of about 6.677 kD and
Marker VI: having a molecular weight of about 3.935 kD.

59. The method of claim 57 wherein the plurality are selected from the group consisting of:

Marker VII: having a molecular weight of about 60.958 kD
Marker VIII: having a molecular weight of about 5.148 kD
Marker IX: having a molecular weight of about 5.860 kD
Marker X: having a molecular weight of about 28.097 kD

Marker XI: having a molecular weight of about 2.996 kD
Marker XII: having a molecular weight of about 24.346 kD
Marker XIII: having a molecular weight of about 6.722 kD
Marker XIV: having a molecular weight of about 5.999 kD
Marker XV: having a molecular weight of about 6.159 kD
Marker XVI: having a molecular weight of about 55.785 kD.

60. The method of claim 57 wherein the plurality are selected from the group consisting of:

Marker XVII: having a molecular weight of about 2.540 kD
Marker XVIII: having a molecular weight of about 8.018 kD
Marker XIX : having a molecular weight of about 4.658kD, and
Marker XX : having a molecular weight of about 14.703 kD.

61. The method of claim 57 wherein the plurality are selected from the group consisting of:

Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD, and
Marker XXXII: having a molecular weight of about 16.3 kD.

62. The method of claim 57 wherein the plurality are selected from the group consisting of:

Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD, and
Marker XXVI: having a molecular weight of about 17.9 kD.

63. The method of claim 57 wherein the protein biomarkers are detected by SELDI or immunoassay.

64. The method of claim 57 wherein the sample is selected from blood, serum and plasma.

65. The kit of claim 30 wherein the adsorbent binds a plurality of the biomarkers.

66. The kit of claim 30 wherein the adsorbent is a SELDI probe.

67. The kit of claim 30 further comprising a second adsorbent that binds one of the biomarkers that the first adsorbent does not bind.

68. A kit comprising:

(a) a first capture reagent that binds at least one biomarker selected from the group consisting of:

- Marker I: having a molecular weight of about 7.808 kD
- Marker II: having a molecular weight of about 14.576 kD
- Marker III: having a molecular weight of about 2.062 kD
- Marker IV: having a molecular weight of about 7.974 kD
- Marker V: having a molecular weight of about 6.677 kD
- Marker VI: having a molecular weight of about 3.936 kD
- Marker VII: having a molecular weight of about 60.958 kD
- Marker VIII: having a molecular weight of about 5.149 kD
- Marker IX: having a molecular weight of about 5.861 kD
- Marker X: having a molecular weight of about 28.098 kD
- Marker XI: having a molecular weight of about 2.996 kD
- Marker XII: having a molecular weight of about 24.346 kD
- Marker XIII: having a molecular weight of about 6.722 kD
- Marker XIV: having a molecular weight of about 5.999 kD
- Marker XV: having a molecular weight of about 6.158 kD
- Marker XVI: having a molecular weight of about 55.785 kD
- Marker XVII: having a molecular weight of about 2.540 kD
- Marker XVIII: having a molecular weight of about 8.019 kD

Marker XIX : having a molecular weight of about 4.658 kD
Marker XX: having a molecular weight of about 14.703 kD
Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD
Marker XXVII: having a molecular weight of about 2.79 kD
Marker XXVIII: having a molecular weight of about 3.32 kD
Marker XXIX: having a molecular weight of about 4.29 kD
Marker XXX: having a molecular weight of about 15.9 kD
Marker XXXI: having a molecular weight of about 16.1 kD, and
Marker XXXII: having a molecular weight of about 16.3 kD; and,

(b) a second capture reagent that binds at least one of the biomarkers that is not bound by the first capture reagent.

69. The kit of claim 68 wherein the capture reagent is an immobilized metal chelate.

70. The kit of claim 68 further comprising a wash solution that selectively allows retention of the bound biomarker to the capture reagent as compared with other biomarkers after washing.

71. An article manufacture comprising:

(a) at least one capture reagent that binds to at least one biomarker selected from the group consisting of:

Marker I: having a molecular weight of about 7.808 kD
Marker II: having a molecular weight of about 14.576 kD
Marker III: having a molecular weight of about 2.062 kD
Marker IV: having a molecular weight of about 7.974 kD
Marker V: having a molecular weight of about 6.677 kD
Marker VI: having a molecular weight of about 3.936 kD
Marker VII: having a molecular weight of about 60.958 kD
Marker VIII: having a molecular weight of about 5.149 kD

Marker IX: having a molecular weight of about 5.861 kD
Marker X: having a molecular weight of about 28.098 kD
Marker XI: having a molecular weight of about 2.996 kD
Marker XII: having a molecular weight of about 24.346 kD
Marker XIII: having a molecular weight of about 6.722 kD
Marker XIV: having a molecular weight of about 5.999 kD
Marker XV: having a molecular weight of about 6.158 kD
Marker XVI: having a molecular weight of about 55.785 kD
Marker XVII: having a molecular weight of about 2.540 kD
Marker XVIII: having a molecular weight of about 8.019 kD
Marker XIX : having a molecular weight of about 4.658 kD
Marker XX: having a molecular weight of about 14.703 kD
Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD
Marker XXVII: having a molecular weight of about 2.79 kD
Marker XXVIII: having a molecular weight of about 3.32 kD
Marker XXIX: having a molecular weight of about 4.29 kD
Marker XXX: having a molecular weight of about 15.9 kD
Marker XXXI: having a molecular weight of about 16.1 kD, and
Marker XXXII: having a molecular weight of about 16.3 kD.

72. The article manufacture of claim 71 wherein the biomarker is selected from the group consisting of:

Marker I: having a molecular weight of about 7.808 kD
Marker II: having a molecular weight of about 14.576 kD
Marker III: having a molecular weight of about 2.061 kD
Marker IV: having a molecular weight of about 7.973 kD
Marker V: having a molecular weight of about 6.677 kD and
Marker VI: having a molecular weight of about 3.935 kD.

73. The article manufacture of claim 71 wherein the biomarker is selected from the group consisting of:

- Marker VII: having a molecular weight of about 60.958 kD
- Marker VIII: having a molecular weight of about 5.148 kD
- Marker IX: having a molecular weight of about 5.860 kD
- Marker X: having a molecular weight of about 28.097 kD
- Marker XI: having a molecular weight of about 2.996 kD
- Marker XII: having a molecular weight of about 24.346 kD
- Marker XIII: having a molecular weight of about 6.722 kD
- Marker XIV: having a molecular weight of about 5.999 kD
- Marker XV: having a molecular weight of about 6.159 kD
- Marker XVI: having a molecular weight of about 55.785 kD.

74. The article manufacture of claim 71 wherein the biomarker is selected from the group consisting of:

- Marker XVII: having a molecular weight of about 2.540 kD
- Marker XVIII: having a molecular weight of about 8.018 kD
- Marker XIX : having a molecular weight of about 4.658kD, and
- Marker XX : having a molecular weight of about 14.703 kD.

75. The article manufacture of claim 71 wherein the plurality are selected from the group consisting of:

- Marker XXI: having a molecular weight of about 2.68 kD
- Marker XXII: having a molecular weight of about 3.16 kD
- Marker XXIII: having a molecular weight of about 10.3 kD
- Marker XXIV: having a molecular weight of about 10.8 kD
- Marker XXV: having a molecular weight of about 12.7 kD
- Marker XXVI: having a molecular weight of about 17.9 kD, and
- Marker XXXII: having a molecular weight of about 16.3 kD.

76. The article manufacture of claim 71 wherein the plurality are selected from the group consisting of:

- Marker XXI: having a molecular weight of about 2.68 kD

Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD
Marker XXV: having a molecular weight of about 12.7 kD, and
Marker XXVI: having a molecular weight of about 17.9 kD.

77. A system comprising:

(a) a plurality of capture reagents each of which has bound to it a different biomarker selected from

Marker I: having a molecular weight of about 7.808 kD
Marker II: having a molecular weight of about 14.576 kD
Marker III: having a molecular weight of about 2.062 kD
Marker IV: having a molecular weight of about 7.974 kD
Marker V: having a molecular weight of about 6.677 kD
Marker VI: having a molecular weight of about 3.936 kD
Marker VII: having a molecular weight of about 60.958 kD
Marker VIII: having a molecular weight of about 5.149 kD
Marker IX: having a molecular weight of about 5.861 kD
Marker X: having a molecular weight of about 28.098 kD
Marker XI: having a molecular weight of about 2.996 kD
Marker XII: having a molecular weight of about 24.346 kD
Marker XIII: having a molecular weight of about 6.722 kD
Marker XIV: having a molecular weight of about 5.999 kD
Marker XV: having a molecular weight of about 6.158 kD
Marker XVI: having a molecular weight of about 55.785 kD
Marker XVII: having a molecular weight of about 2.540 kD
Marker XVIII: having a molecular weight of about 8.019 kD
Marker XIX : having a molecular weight of about 4.658 kD
Marker XX: having a molecular weight of about 14.703 kD
Marker XXI: having a molecular weight of about 2.68 kD
Marker XXII: having a molecular weight of about 3.16 kD
Marker XXIII: having a molecular weight of about 10.3 kD
Marker XXIV: having a molecular weight of about 10.8 kD

Marker XXV: having a molecular weight of about 12.7 kD
Marker XXVI: having a molecular weight of about 17.9 kD
Marker XXVII: having a molecular weight of about 2.79 kD
Marker XXVIII: having a molecular weight of about 3.32 kD
Marker XXIX: having a molecular weight of about 4.29 kD
Marker XXX: having a molecular weight of about 15.9 kD
Marker XXXI: having a molecular weight of about 16.1 kD, and
Marker XXXII: having a molecular weight of about 16.3 kD.